

Title (en)

SUBSTRATE DEVICE OR PACKAGE USING EMBEDDED LAYER OF VOLTAGE SWITCHABLE DIELECTRIC MATERIAL IN A VERTICAL SWITCHING CONFIGURATION

Title (de)

SUBSTRATANORDNUNG ODER KAPSELUNG MIT EINER EINGEBETTETEN SCHICHT AUS SPANNUNGSSCHALTBAREM DIELEKTRISCHEM MATERIAL IN EINER VERTIKAL-SCHALTKONFIGURATION

Title (fr)

DISPOSITIF DE SUBSTRAT OU BOÎTIER UTILISANT UNE COUCHE INCORPORÉE DE MATÉRIAU DIÉLECTRIQUE COMMUTABLE PAR TENSION DANS UNE CONFIGURATION DE COMMUTATION VERTICALE

Publication

EP 2277364 A1 20110126 (EN)

Application

EP 09732672 A 20090413

Priority

- US 2009040384 W 20090413
- US 41758909 A 20090402
- US 4488308 P 20080414

Abstract (en)

[origin: US2009256669A1] A substrate device includes an embedded layer of VSD material that overlays a conductive element or layer to provide a ground. An electrode, connected to circuit elements that are to be protected, extends into the thickness of the substrate to make contact with the VSD layer. When the circuit elements are operated under normal voltages, the VSD layer is dielectric and not connected to ground. When a transient electrical event occurs on the circuit elements, the VSD layer switches instantly to a conductive state, so that the first electrode is connected to ground.

IPC 8 full level

H05K 1/02 (2006.01)

CPC (source: EP KR US)

H01L 23/12 (2013.01 - KR); **H05K 1/0257** (2013.01 - EP US); **H05K 3/46** (2013.01 - KR); **H05K 1/0259** (2013.01 - EP US); **H05K 1/0373** (2013.01 - EP US); **H05K 2201/0738** (2013.01 - EP US); **H05K 2203/105** (2013.01 - EP US)

Citation (search report)

See references of WO 2009129188A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

US 2009256669 A1 20091015; **US 8203421 B2 20120619**; CN 101965758 A 20110202; CN 101965758 B 20120829; EP 2277364 A1 20110126; HK 1148639 A1 20110909; JP 2011517138 A 20110526; KR 101235950 B1 20130221; KR 20100135821 A 20101227; KR 20120081251 A 20120718; TW 200951999 A 20091216; US 2012256721 A1 20121011; US 9007165 B2 20150414; WO 2009129188 A1 20091022

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US 41758909 A 20090402; CN 200980108307 A 20090413; EP 09732672 A 20090413; HK 11102609 A 20110315; JP 2011505116 A 20090413; KR 20107023158 A 20090413; KR 20127017099 A 20090413; TW 98111772 A 20090409; US 2009040384 W 20090413; US 201213524776 A 20120615